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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/600,942	06/20/2003	Roland R. Loh	25060B	9454

22889 7590 03/22/2005

OWENS CORNING
2790 COLUMBUS ROAD
GRANVILLE, OH 43023

EXAMINER

WOODWARD, ANA LUCRECIA

ART UNIT	PAPER NUMBER
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1711

DATE MAILED: 03/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/600,942

Applicant(s)

LOH, ROLAND

Examiner

Ana L. Woodward

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE Three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02/02/2004, 01/12/2005
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213..

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 1-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 14-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 02/02/04
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group III in the reply filed on January 12, 2005 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

2. Claims 1-13 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected group, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on January 12, 2005.

Claim Rejections - 35 USC § 112

3. Claims 14-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claimed terms, "multifunctional" and "functional" are indefinite as to scope and meaning.

In claim 16, it is unclear as to whether or not the "polystyrene" is defining the polymer matrix of claim 14.

In claims 17, 18 and 20, there is no express antecedent basis for "the major polymeric component" or "the minor functional additive component".

In claims 17, 18 and 20, it is unclear if or how "a group consisting of" (with emphasis) limits the recited components.

In claim 18, there is no express antecedent basis in claim 14 for "the flame retardant".

In claims 18 and 20, it is unclear what is meant by "HBCD, DCP, BE-51 and TPP".

Claim Rejections - 35 USC § 102/103

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 14 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Japanese 2000-297169.

JP '169 discloses a thermoplastic polyester resin foam comprising a graft copolymer consisting of a rubbery core and a shell formed by graft polymerizing an alkyl ester of an ethylenically unsaturated carboxylic acid.

It is maintained that the core/shell graft copolymer of the reference meets the presently claimed multifunctional microcapsules, when the latter are given their broadest reasonable interpretation.

7. Claim 14 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over EP 178554.

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EP '554 discloses a microencapsulated flame retardant having an average particle size of 0.01-0.1 mm, which comprises ammonium polyphosphate encapsulated with polyurethane. The flame retardant is used for flameproofing polyurethane foams.

It is maintained that the microencapsulated flame retardant of the reference meets the presently claimed multifunctional microcapsules, when the latter are given their broadest reasonable interpretation.

8. Claims 14, 15, and 19 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over U.S. 4,138,356 (Vincent et al).

Vincent et al disclose encapsulated flame-retardants having an average diameter below 5 microns and their incorporation into polymeric materials, such as polyurethane foams. Preferred microcapsules are derived by admixing a non-polymeric crosslinking agent (isocyanate or orthoester), a flame retardant and a hydroxyl group-containing polymeric emulsifying agent. The crosslinking agent reacts with the polymeric emulsifying agent to form the capsule wall. Preferably, between about 4 to about 20 parts of emulsifying agent per part of crosslinking agent is used (column 3, line 65- column 4, line 22).

It is maintained that the encapsulated flame retardant meets the requirements of the above rejected claims. This is because the flame retardant corresponds to the core material, the polymeric emulsifying agent corresponds to the major polymeric component of the shell and the crosslinking agent corresponds to the minor additive component of the shell. The onus is shifted to applicants to establish that the product of the present claims is not the same as or obvious from that set forth by the reference.

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Claim Rejections - 35 USC § 103

9. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. 4,138,356 (Vincent et al) described hereinabove

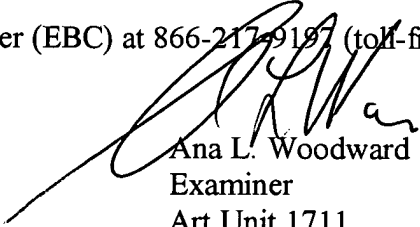
The use of polystyrene as the material for forming the capsule wall is clearly taught at column 3, line 57.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ana L. Woodward whose telephone number is (571) 272-1082. The examiner can normally be reached on Monday-Friday (8:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James J. Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ana L. Woodward
Examiner
Art Unit 1711

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